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October 17, 2001

Ms. Magalie Salas, Secretary Federal Communications Commission 445 12th Street SW Washington DC 20554

> ET Docket No. 98-153 Revision of Part 15 of the Commission's Rules Re:

Regarding Ultra-Wideband Transmission Systems

Ex parte Communication

Dear Ms. Salas:

On behalf of XtremeSpectrum, Inc., and pursuant to Section 1.1206(b)(1) of the Commission's Rules, I am enclosing two copies of the attached written communication for inclusion in the above-referenced docket.

Kindly date-stamp and return the extra copy of this letter.

If there are any questions about this filing, please call me at the number above.

Respectfully submitted,

Mitchell Lazarus/cm

cc: Chairman Michael K. Powell Commissioner Kathleen O. Abernathy Commissioner Michael J. Copps

Commissioner Kevin J. Martin

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FEDERAL COMMITTANCATIONS COMMISSION
OFFICE OF THE SECRETARY

## BY FEDERAL EXPRESS

Honorable Paul Wolfowitz Deputy Secretary of Defense 1010 Defense Pentagon Washington DC 20301-1010

> Re: FCC Ultra-Wideband Proceeding ET Docket No. 98-153

Dear Deputy Secretary Wolfowitz:

On behalf of XtremeSpectrum, Inc., an ultra-wideband (UWB) manufacturer, I am writing to comment on your letter of September 25 to Secretary of Commerce Donald L. Evans, concerning UWB.

We share your concern that mass marketing of UWB devices must be governed by regulations that fully protect GPS and other critical national security and safety-of-life systems. XtremeSpectrum has made specific technical proposals on these issues to the FCC. In particular, even though we are confident the extremely low GPS-band emissions levels requested by the U.S. GPS Industry Council are unnecessarily conservative, we have nonetheless told the FCC we will abide by those limits. The same limits also fully resolve the concerns that NTIA expressed in the FCC docket.

XtremeSpectrum seeks to protect GPS and other sensitive bands not merely for regulatory compliance, but also as a matter of good business. Our customers are manufacturers that will factory-install XtremeSpectrum's device in many types of consumer and public-safety products. Many of those products also incorporate other radio functions, such as GPS and PCS. Our customers therefore insist on a UWB device that fully protects other receivers just centimeters away. XtremeSpectrum accepts stringent regulation in the Government bands in part because most lie very close to non-Government bands that we must protect anyway, for commercial reasons.

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We also concur that UWB should not become a precedent for unlicensed narrowband emissions in the restricted bands.

We respectfully disagree with you on one technical issue. UWB emissions do not aggregate, and do not raise the noise floor. To the contrary, the signal from each device is barely above the noise floor to begin with, and then drops off so fast over short distances that the signals cannot add up. This is the same reason why noise from consumer digital devices does not aggregate. In fact, existing computers and laptops are a far greater threat to GPS than is UWB, under the FCC's proposed rules. The absence of interference from these ubiquitous devices is persuasive evidence that UWB will also be safe.

Your letter asks NTIA to study the effects of aggregation. NTIA did so earlier in the proceeding, but unfortunately produced a misleading result. NTIA's simulation assumed UWB emitters scattered over the area of interest, at varying densities. But for every run of the simulation, in addition to the scattered emitters, NTIA always inserted an extra emitter at a distance close to the victim receiver -- always close enough to interfere on its own. NTIA's reasons for adding this emitter are not clear. But the interference NTIA attributed to aggregation actually was dominated in each case by that extra, close-in emitter. When XtremeSpectrum reran the simulation with that one emitter removed, the interference disappeared. The study thus establishes that UWB aggregation does *not* occur. No technical study in the FCC docket -- or elsewhere, to our knowledge -- has shown otherwise.

Consumers and the economy need UWB, and its unique combination of high speed, low cost, and low battery drain. XtremeSpectrum devices have only a 10-meter range. But within that distance, they will wirelessly interconnect computers, laptops, printers, Palm-type organizers, TV sets, cable set-top boxes, video games, VCRs and DVD players, CD and MP3 players . . . any device that runs on information.

Public safety agencies also need UWB, but will not be able to fund its continuing development on their own. Public safety users, like all others, will benefit from the low cost and high performance resulting from the extensive engineering and plant investments that only consumer applications can support.

Today the United States leads the world in UWB technology, but government-funded competitors overseas are close behind. The industry needs prompt action by the FCC to sell product and to attract investment. One major U.S. UWB company has already folded, unable to wait out the regulatory delays. Further delay will only trigger more such failures.

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With over 700 submissions in the docket, including seven large-scale technical studies, the FCC has all the data it needs to regulate UWB so as to fully protect all other users of the spectrum. The Department of Defense is already benefitting from this technology, and understands its advantages first-hand. XtremeSpectrum fully supports the goal of the FCC, the Department of Defense, and all other interested parties for a commercial UWB deployment that is completely safe for Government and non-Government users alike.

If you have any questions about this letter, please do not hesitate to call me at the number above.

Respectfully submitted,

Metchell Regards / Com

Mitchell Lazarus

Counsel for XtremeSpectrum, Inc.

cc: Donald L. Evans, Secretary of Commerce Chairman Michael K. Powell, FCC Commissioner Kathleen Q. Abernathy, FCC Commissioner Michael J. Copps, FCC Commissioner Kevin J. Martin, FCC

Magalie Roman Salas, Esq., Secretary, FCC (2 copies)